



Coffee Break Training - Fire Protection Series

Inspection Techniques: A Day at the Fair

No. FP-2013-11 March 12, 2013

Learning Objective: The student shall be able to identify hazardous conditions commonly found at outdoor carnivals and fairs.

The illustration would be a candidate for a contest to determine how many fire safety violations could be identified in a picture. The annual event is a major, free public outdoor fair in a large city.

In past editions of the model fire codes, carnivals, fairs and similar outdoor venues were addressed in a single chapter or article. Now, the various hazards that might occur at these events are distributed throughout the codes in sections on tents and canopies, flammable and combustible liquids, places of assembly, liquefied petroleum gases, and general fire safety precautions.

In no particular order, the following hazards can be identified:

- The black drum at the center of the picture is dispensing kerosene (a Class II combustible liquid) by gravity directly into an open flame oven (temporarily constructed of refractory ceramic material called “fire brick”) that is being used to demonstrate glassblowing techniques.
- Liquid or gas fuel-fired appliances generally are required to comply with the conditions of the locally adopted fuel gas or mechanical code, neither of which provides clear design guidance on a temporary installation such as the one shown.
- Open flame devices inside or within 20 feet (6,096 mm) of tents, canopies and membrane structures are not permitted unless authorized by the code official.
- There is no shut-off valve at the container end of the pipe that feeds the burner. If someone were to dislodge the pipe, an uncontrolled flow of kerosene could occur. The containment pallet beneath the wooden stand might catch some of the free-flowing liquid.
- The black drum is replenished from another vessel inside an overpack drum located at the lower right-hand side of the picture. The flexible transfer hose from the hand pump to the upper bung on the drum also is exposed to pedestrian traffic.
- The portable liquefied petroleum gas container should be located at least 10 feet (3,048 mm) from the canopy area and secured in place to prevent unauthorized movement.
- Approved “No Smoking” signs should be prominently displayed on the canopies.
- Combustible liquid storage should be located at least 50 feet (15,240 mm) from the canopies.

Some of the conditions seen here may not fit within strict definitions or code requirements. This often creates stress on the code official who can't find a solution to the problem “in the code.” These unusual circumstances require the code official to use creativity and judgment to improve public safety.



Fire hazards pertaining to outdoor carnivals and fairs include the improper use of combustible liquids and liquefied petroleum gases.



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